

## Connecting via Winsock to STN

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LOGINID: SSPTAKAB1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* \* \* \* \* \* \* Welcome to STN International \* \* \* \* \* \* \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
NEWS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change
NEWS	22	DEC 17	USPATOLD added to additional database clusters
NEWS	23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS	24	DEC 17	DGENE now includes more than 10 million sequences
NEWS	25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS	26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS	27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS	28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS	29	JAN 02	STN pricing information for 2008 now available
NEWS	30	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	31	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS	32	JAN 28	MARPAT searching enhanced

NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication  
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment  
NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements  
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 16:20:03 ON 12 FEB 2008

FILE 'REGISTRY' ENTERED AT 16:20:10 ON 12 FEB 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 FEB 2008 HIGHEST RN 1002789-56-1  
DICTIONARY FILE UPDATES: 11 FEB 2008 HIGHEST RN 1002789-56-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

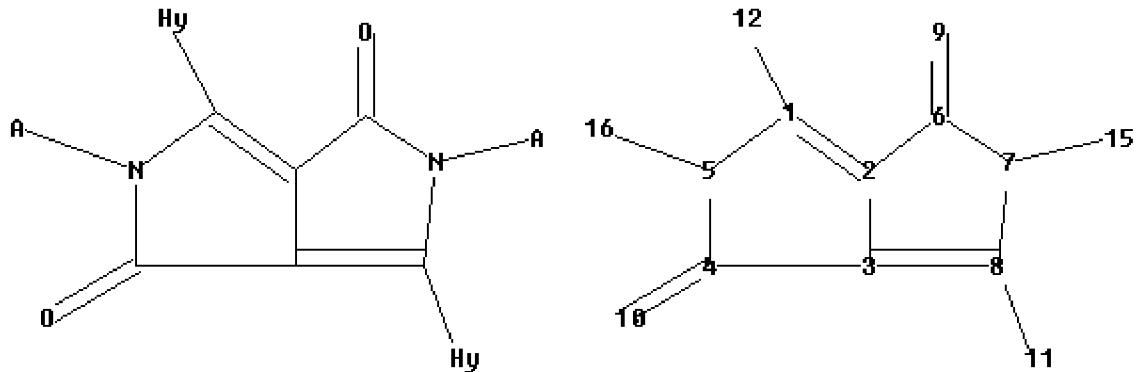
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stnqgen/stndoc/properties.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10551976.str



chain nodes :

9 10 11 12 15 16

ring nodes :

1 2 3 4 5 6 7 8

chain bonds :

1-12 4-10 5-16 6-9 7-15 8-11

ring bonds :

1-2 1-5 2-3 2-6 3-4 3-8 4-5 6-7 7-8

exact/norm bonds :

1-2 1-5 1-12 2-3 2-6 3-4 3-8 4-5 4-10 5-16 6-7 6-9 7-8 7-15 8-11

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:CLASS 10:CLASS  
11:Atom 12:Atom 15:CLASS 16:CLASS

Element Count :

Node 11: Limited

N,N1-2  
C,C4-5

Node 12: Limited

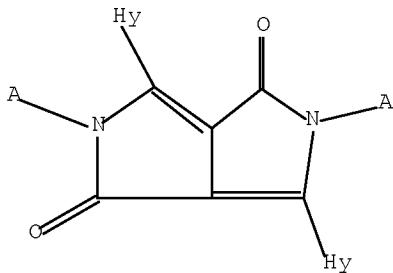
N,N1-2  
C,C4-5

L1 STRUCTURE UPLOADED

=> d L1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> caslink

CASLINK IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> file caslink

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.46	0.67

FILE 'CAPLUS' ENTERED AT 16:20:45 ON 12 FEB 2008

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FILE 'MARPAT' ENTERED AT 16:20:45 ON 12 FEB 2008

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FILE 'REGISTRY' ENTERED AT 16:20:45 ON 12 FEB 2008

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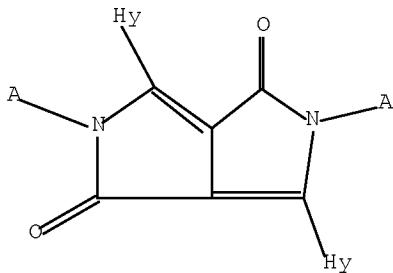
CLUSTER 'CASLINK' ENTERED

Predefined command sequences will be executed in  
REGISTRY, MARPAT, and CAPLUS.

=> d L1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> S L1 SSS SAM

S L1 SSS SAM FILE=REGISTRY  
 SAMPLE SEARCH INITIATED 16:21:25 FILE 'REGISTRY'  
 SAMPLE SCREEN SEARCH COMPLETED - 595 TO ITERATE

100.0% PROCESSED 595 ITERATIONS 1 ANSWERS  
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
 BATCH \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS: 10437 TO 13363  
 PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1  
 1 FILES SEARCHED...

S L2 SSS SAM FILE=MARPAT  
 SAMPLE SEARCH INITIATED 16:21:26 FILE 'MARPAT'  
 SAMPLE SCREEN SEARCH COMPLETED - 520 TO ITERATE

100.0% PROCESSED 520 ITERATIONS 2 ANSWERS  
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
 BATCH \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS: 9052 TO 11748  
 PROJECTED ANSWERS: 2 TO 125

L3 2 SEA SSS SAM L1  
 1 FILES SEARCHED...

=> D scan L3

L3 2 ANSWERS MARPAT COPYRIGHT 2008 ACS on STN  
 IC ICM C07D487-04  
 NCL 548453000  
 CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 28  
 TI Viscosity reducing 1,4-diketo-3,6-diarylpyrrolo[3,4-c]pyrrole derivatives  
 ST diaryldiketopyrrolopyrrole quinacridone viscosity reducing agent; coating  
 pigment viscosity reducing agent

IT Paints  
 Pigments, nonbiological  
 (diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

IT Automobiles  
 (finish; diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

IT Viscosity  
 (lowering agents; diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

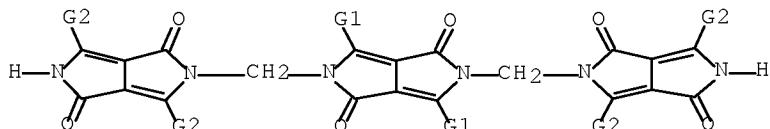
IT 180640-94-2P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

IT 200356-69-0DP, sulfonated 200356-69-0P 200702-73-4P 200702-74-5P  
 200702-88-1P  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

IT 180640-82-8  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

IT 30525-89-4, Paraformaldehyde 54660-00-3, 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (diaryldiketopyrrolopyrrole derivative viscosity reducing agents for pigment dispersions for paints)

MSTR 1



G1 = pyridyl

Patent location:

claim 1

Note:

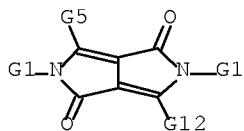
substitution is restricted

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 2 ANSWERS MARPAT COPYRIGHT 2008 ACS on STN  
 IC ICM C07D487-04  
 ICS C09K009-02  
 ICA C07D213-20; C07D221-06; C07D215-04; C07D215-10  
 ICI C07D487-04, C07D209-00, C07D209-32  
 CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 41, 74, 76  
 TI Preparation of electrochromic diketopyrroles for electrochromic display devices  
 ST diketopyrrole prepn electrochromic material; display device electrochromic diketopyrrole

IT    Electrochromic materials  
       (diketopyrroles)  
 IT    Optical imaging devices  
       (electrochromic, diketopyrrole-containing media for)  
 IT    Dyes  
       (electrochromic, diketopyrroles)  
 IT    164790-12-9P    164790-14-1P    164790-16-3P    164790-18-5P    164790-20-9P  
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic  
 preparation); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
       (preparation of electrochromic diketopyrroles for electrochromic display  
       devices)  
 IT    88949-27-3    88949-28-4    88949-39-7    164790-21-0    164790-22-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
       (preparation of electrochromic diketopyrroles for electrochromic display  
       devices from)  
 IT    7681-53-0, Sodium hypophosphite    13943-58-3, Potassium ferrocyanide  
 RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or  
 reagent); USES (Uses)  
       (preparation of electrochromic diketopyrroles for electrochromic display  
       devices media containing)

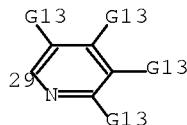
MSTR 1



G1       = alkylcarbonyl <containing 1-14 C>  
 G5       = 15

$^{13}\text{C}^6$  ●  $\text{G16}$

G6       = 29



G12       = 22

$^{2}\text{H}^6$  ●  $\text{G16}$

Patent location: claim 1  
Note: substitution is restricted

ALL ANSWERS HAVE BEEN SCANNED

=> d his

(FILE 'HOME' ENTERED AT 16:20:03 ON 12 FEB 2008)

FILE 'REGISTRY' ENTERED AT 16:20:10 ON 12 FEB 2008  
L1 STRUCTURE uploaded

FILE 'CAPLUS, MARPAT, REGISTRY' ENTERED AT 16:20:45 ON 12 FEB 2008  
L2 1 S L1 SSS SAM FILE=REGISTRY  
L3 2 S L2 SSS SAM FILE=MARPAT

=> S L1 SSS Ful

S L1 SSS FUL FILE=REGISTRY  
FULL SEARCH INITIATED 16:22:39 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 11367 TO ITERATE

100.0% PROCESSED 11367 ITERATIONS 18 ANSWERS  
SEARCH TIME: 00.00.01

L4 18 SEA SSS FUL L1  
1 FILES SEARCHED...

S L4 SSS FUL FILE=MARPAT  
FULL SEARCH INITIATED 16:22:40 FILE 'MARPAT'  
FULL SCREEN SEARCH COMPLETED - 10490 TO ITERATE

100.0% PROCESSED 10490 ITERATIONS 39 ANSWERS  
SEARCH TIME: 00.00.08

L5 39 SEA SSS FUL L1  
1 FILES SEARCHED...

S L4 FILE=CAPLUS  
L6 6 FILE CAPLUS  
1 FILES SEARCHED...

SET DUPORDER FILE  
SET COMMAND COMPLETED

DUP REM L5 L6  
PROCESSING COMPLETED FOR L5  
PROCESSING COMPLETED FOR L6  
L7 40 DUP REM L5 L6 (5 DUPLICATES REMOVED)  
ANSWERS '1-38' FROM FILE MARPAT  
ANSWERS '39-40' FROM FILE CAPLUS

=> D SCAN L6

L6 6 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN  
IC ICM C07D471-04  
ICS G11C013-04; G11B007-24  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other

Reprographic Processes)  
 Section cross-reference(s): 41  
 TI Optical memory devices containing color changeable dyes, and dyes therefor  
 ST fluorescent dye optical recording; memory device optical dye  
 IT Dyes  
     (fluorescent, preparation of, for optical memory devices)  
 IT Memory devices  
     Recording materials  
         (optical, fluorescent dyes for)  
 IT 128-69-8P 579-74-8P 54177-02-5P 128318-44-5P, 2-  
     Methoxybenzoylsuccinic acid dimethyl ester 128318-45-6P 128318-63-8P  
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
     (Reactant or reagent)  
         (preparation and reaction of, fluorescent dye for optical memory device  
         from)  
 IT 41572-87-6P 70485-42-6P 106822-31-5P 110590-74-4P 110590-75-5P  
     110590-76-6P 110590-77-7P 110590-78-8P 110590-79-9P 110590-80-2P  
     110590-81-3P 110590-82-4P 110590-83-5P 110590-84-6P 110613-98-4P  
     118560-90-0P 118560-91-1P 118560-92-2P 118560-93-3P 118560-94-4P  
     118560-95-5P 119273-54-0P 119273-55-1P 128318-46-7P 128318-47-8P  
     128318-48-9P 128318-49-0P 128318-50-3P 128318-51-4P  
     128318-52-5P 128318-53-6P 128318-54-7P 128318-55-8P  
     128318-56-9P 128318-57-0P 128318-58-1P 128318-59-2P 128318-60-5P  
     128318-61-6P 128318-62-7P  
     RL: PREP (Preparation)  
         (preparation of, as color changeable dye in optical memory device)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

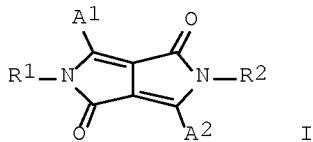
=> D L7 ibib abs fqhit

L7 ANSWER 1 OF 40 MARPAT COPYRIGHT 2008 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 141:351424 MARPAT Full-text  
 TITLE: Fluorescent diketopyrrolopyrroles  
 INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 83 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004090046	A1	20041021	WO 2004-EP50403	20040401
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1611207	A1	20060104	EP 2004-725051	20040401
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR			

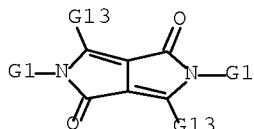
CN 1771298	A	20060510	CN 2004-80009420	20040401
JP 2006524281	T	20061026	JP 2006-505506	20040401
US 2007010672	A1	20070111	US 2005-551976	20051005
MX 2005PA10866	A	20060605	MX 2005-PA10866	20051010
IN 2005CN02934	A	20070608	IN 2005-CN2934	20051109
PRIORITY APPLN. INFO.:			EP 2003-100972	20030410
			WO 2004-EP50403	20040401

GI



AB Fluorescent diketopyrrolopyrroles I [R1, R2 = (halo-substituted) C1-25 alkyl, (C1-4 alkyl-substituted) allyl, cycloalkyl, (substituted) phenyl-cycloalkyl condensed group, alkenyl, cycloalkenyl, alkynyl, haloalkyl, haloalkenyl, haloalkynyl, ketone or aldehyde group, ester group, carbamoyl, silyl group, siloxanyl, (substituted) aryl, (substituted) heteroaryl, or CR<sub>3</sub>R<sub>4</sub>(CH<sub>2</sub>)<sub>m</sub>A<sub>3</sub>; m = 0-4; R<sub>3</sub>, R<sub>4</sub> = H, C<sub>2</sub>-4 alkyl, or (substituted) Ph; A<sub>1</sub>, A<sub>1</sub> = 5- or 6-membered heterocyclic ring containing 1-3 heteroatoms selected from N, O, and S] are prepared for use as guest and host chromophores in electroluminescent compns., with the absorption spectrum of the guest chromophore overlapping the fluorescent emission spectrum of the host chromophore and the photoluminescence emission peak of the host chromophore being 500-720 nm. A typical I was manufactured by reaction of 27.7 g 5-bromo-2-cyanopyridine 20 h at 100-110° with 16.2 g diisopropyl succinate in tert-amyl alc., and reaction of 2 g intermediate 21 h with 2.4 g BuI in NMP in the presence of tert.-BuOK.

MSTR 1



G1 = CH<sub>2</sub>CH=CH<sub>2</sub>

G13 = pyridyl (opt. subst.)

Patent location: claim 1

Note: substitution is restricted

Note: also incorporates claim 11

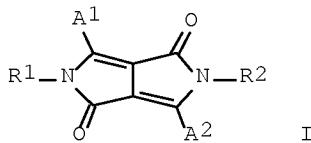
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d L7 ibib abs fqhit 1-40

L7 ANSWER 1 OF 40 MARPAT COPYRIGHT 2008 ACS on STN DUPLICATE 1  
ACCESSION NUMBER: 141:351424 MARPAT Full-text  
TITLE: Fluorescent diketopyrrolopyrroles  
INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: PCT Int. Appl., 83 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004090046	A1	20041021	WO 2004-EP50403	20040401
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1611207	A1	20060104	EP 2004-725051	20040401
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1771298	A	20060510	CN 2004-80009420	20040401
JP 2006524281	T	20061026	JP 2006-505506	20040401
US 2007010672	A1	20070111	US 2005-551976	20051005
MX 2005PA10866	A	20060605	MX 2005-PA10866	20051010
IN 2005CN02934	A	20070608	IN 2005-CN2934	20051109
PRIORITY APPLN. INFO.:			EP 2003-100972	20030410
			WO 2004-EP50403	20040401

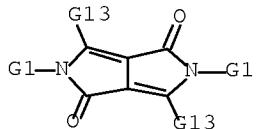
GI



AB Fluorescent diketopyrrolopyrroles I [R1, R2 = (halo-substituted) C1-25 alkyl, (C1-4 alkyl-substituted) allyl, cycloalkyl, (substituted) phenyl-cycloalkyl condensed group, alkenyl, cycloalkenyl, alkynyl, haloalkyl, haloalkenyl, haloalkynyl, ketone or aldehyde group, ester group, carbamoyl, silyl group, siloxanyl, (substituted) aryl, (substituted) heteroaryl, or CR<sub>3</sub>R<sub>4</sub>(CH<sub>2</sub>)<sub>m</sub>A<sub>3</sub>; m = 0-4; R<sub>3</sub>, R<sub>4</sub> = H, C<sub>2</sub>-4 alkyl, or (substituted) Ph; A<sub>1</sub>, A<sub>1</sub> = 5- or 6-membered heterocyclic ring containing 1-3 heteroatoms selected from N, O, and S] are prepared for use as guest and host chromophores in electroluminescent compns.,

with the absorption spectrum of the guest chromophore overlapping the fluorescent emission spectrum of the host chromophore and the photoluminescence emission peak of the host chromophore being 500-720 nm. A typical I was manufactured by reaction of 27.7 g 5-bromo-2-cyanopyridine 20 h at 100-110° with 16.2 g diisopropyl succinate in tert-amyl alc., and reaction of 2 g intermediate 21 h with 2.4 g BuI in NMP in the presence of tert.-BuOK.

MSTR 1



G1 = CH<sub>2</sub>CH=CH<sub>2</sub>

G13 = pyridyl (opt. subst.)

Patent location: claim 1

Note: substitution is restricted

Note: also incorporates claim 11

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 40 MARPAT COPYRIGHT 2008 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 128:181675 MARPAT Full-text  
Correction of: 128:76655

TITLE: Diketopyrrolopyrrole derivatives and manufacture thereof, manufacture of coating materials containing the same, and reducing pigmented organic polymer solutions viscosity by using the same

INVENTOR(S): Hendi, Shivakumar Basalingappa

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

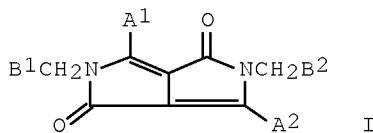
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

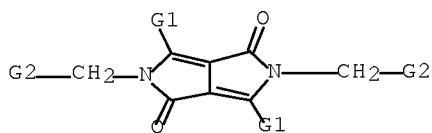
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 811625	A2	19971210	EP 1997-810324	19970527
EP 811625	A3	19980408		
EP 811625	B1	20020417		
R: CH, DE, ES, FR, GB, IT, LI, NL				
CA 2206756	A1	19971205	CA 1997-2206756	19970603
CN 1171402	A	19980128	CN 1997-112961	19970604
CN 1067395	B	20010620		
JP 10081687	A	19980331	JP 1997-147565	19970605
BR 9703467	A	19981006	BR 1997-3467	19970605
PRIORITY APPLN. INFO.:			US 1996-19138P	19960605
			US 1996-27469P	19960926
			US 1996-27470P	19960926



AB The title compds. are I [A1, A2 = aryl; B1, B2 = organic group] prepared from I (B1, B2 = OH) with or without isolation. 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole, quinacridone, and paraformaldehyde in concentrated sulfuric acid gave I (A1 = A2 = Ph; Q = quinacridinyl).

MSTR 1



G1 = pyridyl

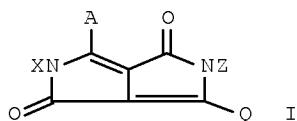
Patent location: claim 1

L7 ANSWER 3 OF 40 MARPAT COPYRIGHT 2008 ACS on STN DUPLICATE 3  
 ACCESSION NUMBER: 123:146701 MARPAT Full-text  
 TITLE: 1,4-diketopyrrolo[3,4-c]pyrroles, their preparation and their use  
 INVENTOR(S): Zambounis, John; Hao, Zhimin; Iqbal, Abul  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 35 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 648770	A2	19950419	EP 1994-810580	19941004
EP 648770	A3	19950531		
EP 648770	B1	20000517		
R: BE, CH, DE, FR, GB, IT, LI, NL				
US 5484943	A	19960116	US 1994-319406	19941006
CA 2117865	A1	19950414	CA 1994-2117865	19941011
JP 07188234	A	19950725	JP 1994-246632	19941013
JP 3596915	B2	20041202		
EP 690057	A1	19960103	EP 1995-810412	19950620

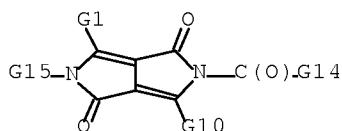
EP 690057	B1	19990908		
R: CH, DE, FR, GB, IT, LI				
EP 690058	A1	19960103	EP 1995-810413	19950620
EP 690058	B1	19990908		
R: CH, DE, FR, GB, IT, LI				
EP 690059	A1	19960103	EP 1995-810414	19950620
EP 690059	B1	19990908		
R: CH, DE, FR, GB, IT, LI				
US 5591865	A	19970107	US 1995-493853	19950622
US 5646299	A	19970708	US 1995-493776	19950622
US 5650520	A	19970722	US 1995-493516	19950622
CA 2152744	A1	19951230	CA 1995-2152744	19950627
CA 2152745	A1	19951230	CA 1995-2152745	19950627
CA 2152748	A1	19951230	CA 1995-2152748	19950627
JP 08020731	A	19960123	JP 1995-163153	19950629
JP 3637105	B2	20050413		
JP 08027391	A	19960130	JP 1995-163151	19950629
JP 3645314	B2	20050511		
JP 08048908	A	19960220	JP 1995-163152	19950629
JP 3645315	B2	20050511		
US 5616725	A	19970401	US 1995-541004	19951011
PRIORITY APPLN. INFO.:				
			CH 1993-3079	19931013
			CH 1994-2074	19940629
			CH 1994-2075	19940629
			CH 1994-2076	19940629
			US 1994-319406	19941006

GI



AB The pyrrolopyrrole diones (I; A, Q = aromatic group; X = H, RO<sub>2</sub>C; Z = CO<sub>2</sub>R, where R = organic group) are obtained for use as UV-fluorescent pigments. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole was treated with di-tert-Bu carbonate to give I (A = Q = Ph; X = Z = tert-butoxycarbonyl).

MSTR 1



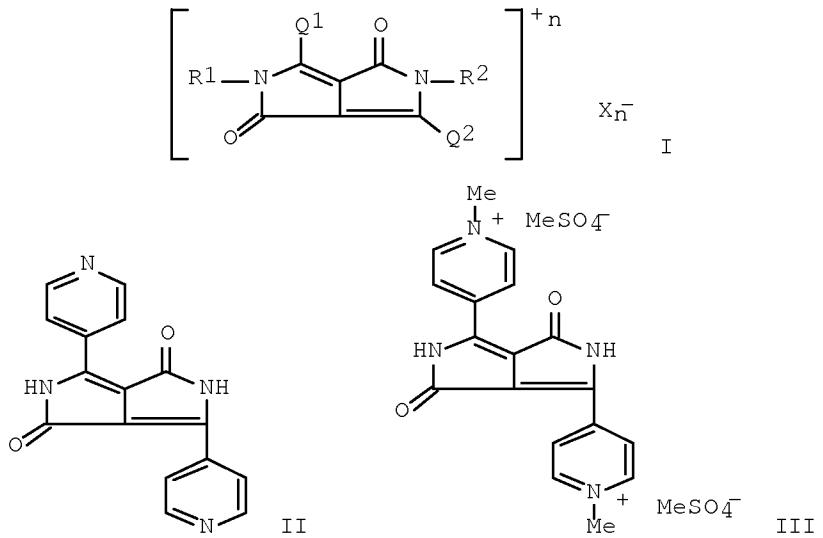
G1 = pyridyl  
 G10 = pyridyl  
 G15 = 136

Patent location: claim 1  
 Note: substitution is restricted

L7 ANSWER 4 OF 40 MARPAT COPYRIGHT 2008 ACS on STN DUPLICATE 4  
 ACCESSION NUMBER: 123:83351 MARPAT [Full-text](#)  
 TITLE: Preparation of electrochromic diketopyrroles for electrochromic display devices  
 INVENTOR(S): Mizuguchi, Jin; Iqbal, Abul; Giller, Gerald  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4435211	A1	19950427	DE 1994-4435211	19940930
PRIORITY APPLN. INFO.:			CH 1993-2978	19931004

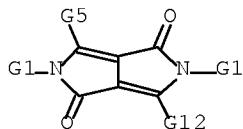
GI



AB The title compds. [I; Q1 = (un)substituted quaternary N-heteroarom.-bound hydrocarbon; Q2 = Q1, (un)substituted aryl; R1, R2 = H, alkyl, haloalkyl, cycloalkyl, (un)substituted Ph, (un)substituted PhCH<sub>2</sub>, etc.; X = mono-basic acid anion; n = 1, 2], useful in electrochromic display devices, are prepared

Thus, diketopyrrole, II, was reacted with di-Me sulfate, producing an electrochromic salt, III, which, in an electrochromic display device with K4Fe(CN)6 and Na hypophosphite at 1.5V for 1 s, demonstrated a contrast ratio (560 nm) of 8 and a useable lifetime without contrast reduction of >1000 cycles.

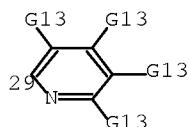
MSTR 1



G1 = alkylcarbonyl <containing 1-14 C>  
G5 = 15

$_{15}^{G6}$  ●  $G16$

G6 = 29



G12 = 22

$_{22}^{G6}$  ●  $G16$

Patent location: claim 1  
Note: substitution is restricted

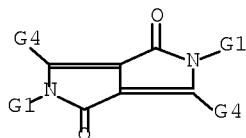
L7 ANSWER 5 OF 40 MARPAT COPYRIGHT 2008 ACS on STN DUPLICATE 5  
ACCESSION NUMBER: 113:68456 MARPAT Full-text  
TITLE: Optical memory devices containing color changeable  
dyes, and dyes therefor  
INVENTOR(S): Langhals, Heinz; Potrawa, Thomas  
PATENT ASSIGNEE(S): Riedel-de Haen A.-G., Germany  
SOURCE: PCT Int. Appl., 96 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9001480	A1	19900222	WO 1989-EP866	19890724
W: JP, US RW: CH, DE, FR, GB, NL				
DE 3901988	A1	19900201	DE 1989-3901988	19890124
DE 3908312	A1	19900927	DE 1989-3908312	19890314
EP 426717	A1	19910515	EP 1989-908407	19890724
EP 426717	B1	19960424		
R: CH, DE, FR, GB, LI, NL				
JP 04500935	T	19920220	JP 1989-507776	19890724
US 5354869	A	19941011	US 1991-640367	19910129
PRIORITY APPLN. INFO.:				
			DE 1988-3825943	19880729
			DE 1989-3901988	19890124
			DE 1989-3908312	19890314
			DE 1988-3808312	19890314
			WO 1989-EP866	19890724

AB The dyes with  $\geq 2$  different color forms, one of which can be changed to the other by supplying energy, are described which are used as storage media in optical memories. The dyes are solid state fluorescent dyes. Thus, 3,6-bis(2'-methoxyphenyl)-2,5-dihydropyrrolo(3,4-c)pyrrole-1,4-dione was prepared

MSTR 1



G1 = Me

G4 = pyridyl (opt. subst.)

Patent location: claim 1

L7 ANSWER 6 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 144:138473 MARPAT Full-text

TITLE: Fluorescent quinacridones and compositions containing them and their uses

INVENTOR(S): Yamamoto, Hiroshi; Dan, Norihisa; Van der Schaaf, Paul Adriaan

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

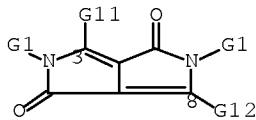
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006003090	A1	20060112	WO 2005-EP52841	20050620

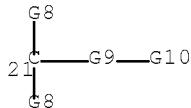
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,  
 NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,  
 SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
 ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,  
 KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,  
 KZ, MD, RU, TJ, TM  
 EP 1769048 A1 20070404 EP 2005-753878 20050620  
 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR  
 CN 1977029 A 20070606 CN 2005-80021864 20050620  
 KR 2007043810 A 20070425 KR 2007-702224 20070129  
 PRIORITY APPLN. INFO.: EP 2004-103025 20040629  
 WO 2005-EP52841 20050620

**AB** Fluorescent quinacridone derivs. and guest-host chromophore compns. comprising them in conjunction with diketopyrrolopyrrole host chromophores are described. The use of the derivs for coloring a high mol. weight organic material, as fluorescent tracers, in color changing media, in solid-state dye lasers, electroluminescent lasers and in electroluminescent devices is also described.

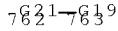
MSTR 2



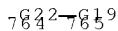
G1 = 21



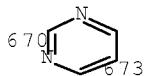
G11 = 762



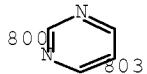
G12 = 764



G21 = 670-3 673-763



G22 = 800-8 803-765



Patent location: claim 7  
Note: also incorporates claim 10  
Note: additional ring formation also claimed

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 142:155935 MARPAT Full-text  
TITLE: Processes for the preparation of fuopyrroles and diketopyrrolopyrroles (DPPs) via microwave-assisted cyclocondensations of acylpyrrolecarboxylate derivatives, intramolecularly or with nitriles  
INVENTOR(S): Riggs, Richard Lewis; Westwood, Nicholas James; Smith, David MacDonald; Morton, Colin  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: PCT Int. Appl., 33 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005005430	A2	20050120	WO 2004-EP51259	20040628
WO 2005005430	A3	20050616		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004255863	A1	20050120	AU 2004-255863	20040628

EP 1641802	A2	20060405	EP 2004-766084	20040628
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1816553	A	20060809	CN 2004-80019155	20040628
US 2007100135	A1	20070503	US 2005-561393	20051219
IN 2006CN00451	A	20070817	IN 2006-CN451	20060203
PRIORITY APPLN. INFO.:			EP 2003-405507	20030707
			WO 2004-EP51259	20040628

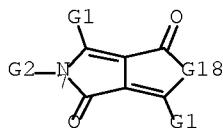
OTHER SOURCE(S): CASREACT 142:155935

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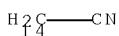
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to a process for the preparation of furopyrroles I, comprising (a) heating a compound II under microwave irradiation, optionally in the presence of an inert solvent [wherein A1 and A2 are C1-C18 alkyl, C2-C18 alkenyl, C2-C18 alkynyl, C5-C8 cycloalkyl, C5-C8 cycloalkenyl, aryl, or heteroaryl; A3 is H, C1-C18 alkyl, cyanomethyl, Ar3, -CR30R31-(CH<sub>2</sub>)<sub>m</sub>-Ar3, or -Y-R32, wherein R30 and R31 independently stand for H or C1-C4 alkyl, or Ph which can be substituted up to three times with C1-C4 alkyl; Ar3 is aryl, C5-C8 cycloalkyl, C5-C8 cycloalkenyl, or heteroaryl, which can be substituted one to three times with C1-C8 alkyl, C1-C8 alkoxy, halogen, or Ph, which can be substituted with C1-C8 alkyl or C1-C8 alkoxy 1-3 times; m is 0, 1, 2, 3, or 4; R is C1-C18 alkyl, in particular C1-C4 alkyl, aryl, in particular Ph, or aralkyl, in particular benzyl, which can be substituted one to three times with C1-C8 alkyl, C1-C8 alkoxy, or halogen; Y is C(O), C(O)O, C(O)NH, SO<sub>2</sub>NH, or SO<sub>2</sub>; and R32 is C1-C18 alkyl, Ar3, or aralkyl]. Claims also cover diketopyrrolopyrroles (DPPs) III [A4 = H], the preparation of III [A4 = C1-C18 alkyl or Ar3] by reaction of I with primary amines A4-NH<sub>2</sub>, and an addnl. preparation of III [A4 = H]. I can be obtained in high yield and high purity. The microwave-assisted process, optionally in the presence of an inert solvent, is rapid and economical. Previously, WO03022848 disclosed a process for the preparation of I, comprising heating a compound II in an inert solvent, such as aromatic solvents, like biphenyl, para-, meta- or ortho-terphenyl, dibenzyltoluene, α-methyl- or β-methylnaphthalene, cyclic carbonates like 1,3-dioxolan-2-one, ketones like acetophenone or benzophenone, γ-butyrolactone, and ethylene glycols like Phe-Cellosolve or Bu-Cellosolve, or mixts. thereof, in particular mixts. of di- and triaryl ethers (Dowtherm A). It was discovered that I can be obtained in higher yield by carrying out the above reaction under microwave radiation. The yield of the desired ring closure reaction, e.g., of Et 4-benzoyl-4,5-dihydro-5-oxo-2-phenylpyrrole-3-carboxylate (IV) to give 3,6-diphenylfuro[3,4-c]pyrrole-1,4-dione (V), is, for example, increased from 40% to 86% by microwave assistance. Moreover, the preparation of the latter lactone (a versatile DPP precursor) requires less time (1-10 min) under microwave irradiation, whereas it takes 60 h when conducted without microwave radiation (conventional method). In addition, the solvent can be omitted in the microwave-assisted ring closure, which makes the process even more cost-effective. For instance, 0.296 mmol IV was irradiated with microwave radiation at 2-45 GHz and forward power 300 W without solvent, heating to 250° for 10 min. The crude product V was allowed to cool, triturated, filtered, and washed with MeOH (86% yield). The DPP compound VI was prepared in 52% yield by condensation of the corresponding lactone (i.e., an analog of V) with PhNH<sub>2</sub> in the presence of CF<sub>3</sub>CO<sub>2</sub>H and DCC at room temperature. Finally, 5-oxo-4,5-dihydrofuran-3-carboxylates react with primary amines to give corresponding pyrrole derivs., which then react with nitriles A2-CN to give compds. III [A4 = H].

MSTR 1



G1 = pyridyl  
G2 = 14



G18 = 334



G19 = alkyl <containing 1-18 C>  
Patent location: claim 1  
Note: also incorporates claim 2, formula III

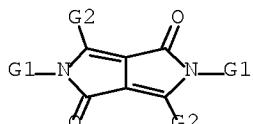
L7 ANSWER 8 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 140:129773 MARPAT Full-text  
TITLE: Polymerizable dicyanopyrrolones, their use in color filters and polymers prepared from these compounds  
INVENTOR(S): Adam, Jean-marie; De Keyzer, Gerardus  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: PCT Int. Appl., 37 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004009710	A1	20040129	WO 2003-EP7638	20030715
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,			

FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2003257464 A1 20040209 AU 2003-257464 20030715  
 EP 1523528 A1 20050420 EP 2003-764989 20030715  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 CN 1668709 A 20050914 CN 2003-817203 20030715  
 JP 2005533839 T 20051110 JP 2004-522457 20030715  
 TW 269072 B 20061221 TW 2003-92119862 20030721  
 US 2005255391 A1 20051117 US 2005-522212 20050114  
 PRIORITY APPLN. INFO.: EP 2002-405640 20020722  
 WO 2003-EP7638 20030715

**AB** The invention relates to the preparation and use of polymerizable diketopyrrolopyrroles in color filters. In contrast to conventional pigments, the polymerizable diketopyrrolopyrroles do not tend to aggregate and, hence, show very good dispersibility. Color filters prepared by using the polymerizable diketopyrrolopyrroles have high transparency and pure hue. In an example, the N atoms of a diketopyrrolopyrrole were treated with 6-chlorohexanol to give the bis(6-hydroxyhexyl) derivative, which was then converted to the red dimethacrylate ester.

MSTR 1



G1 = 18

$\text{C}_8(\text{O})-\text{O}-\text{G10}$

G2 = pyridyl

Patent location:

claim 1

Note:

oxo formation and heteroatom interruption in G24 and G26 also claimed

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 141:61865 MARPAT Full-text

TITLE: Diketopyrrolo[3,4-c]pyrroles and their organic electroluminescent devices showing good durability

INVENTOR(S): Yauchi, Hiroyuki; Onikubo, Shunichi

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

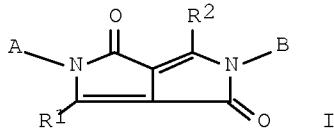
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

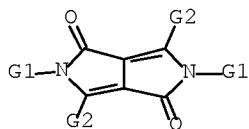
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004175674	A	20040624	JP 2002-340206	20021125
PRIORITY APPLN. INFO.:			JP 2002-340206	20021125
GI				



AB The pyrroles are I (A, B = electron-withdrawing group; R1, R2 = alkyl, aryl, heterocyclyl). The devices emit light from yellow to red with high intensity.

MSTR 1



G1 = 15

<sup>13</sup>C(O)-G3

G2 = 4-pyridyl

Patent location:

claim 1

Note:

additional ring formation also disclosed

L7 ANSWER 10 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 140:411989 MARPAT Full-text

TITLE: Use of latent pigments for hair coloring, composition containing the aforementioned pigments and methods for using them

INVENTOR(S): Lagrange, Alain; Kravtchenko, Sylvain; Greaves, Andrew  
PATENT ASSIGNEE(S): L'oreal, Fr.

SOURCE: Fr. Demande, 40 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

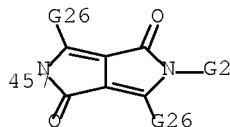
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2847162	A1	20040521	FR 2002-14535	20021120
FR 2847162	B1	20050218		
EP 1426036	A1	20040609	EP 2003-292849	20031118
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
US 2004226111	A1	20041118	US 2003-715839	20031119
US 7326255	B2	20080205		
JP 2004168779	A	20040617	JP 2003-390929	20031120
PRIORITY APPLN. INFO.:			FR 2002-14535	20021120
			US 2003-502655P	20030915

AB A latent, soluble pigment for dyeing of keratinous fibers is disclosed wherein the soluble pigment in fibers is transformed into insol. pigment in water by chemical, thermal, or photochem. process. The pigment has formula A(B)<sub>x</sub> wherein A is a chromophoric radical, and B an atom of hydrogen or formula (I, MeCOFmYnF'mZ), with Z representing a hydrosolubilizing cation Z<sup>+</sup> or a polyethylene glycol residue, Y is a heteroatom, F and F' are a C1-14 linear or branched alkylene which can contain heteroatoms and can be substituted by one or more hydroxy, amino, or halogen group. Formulation of a hair dye containing a pigment breaking down to dipyrroldinonylidene at pH>7 and producing indigo color is disclosed.

MSTR 1A

G1—G2

G1 = 457



G2 = 3

G (O)—G 5—G 4—G 3

G26 = pyridyl

Patent location:

claim 2

Note:

substitution is restricted

Note:

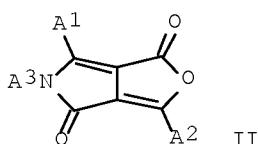
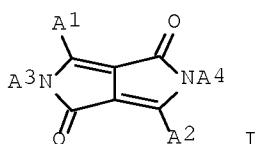
additional heteroatom interruption in G5 and G7  
also claimed

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 138:255221 MARPAT Full-text  
 TITLE: Process for the preparation of diketopyrrolopyrroles (DPPs) from furopyrrolediones and primary amines.  
 INVENTOR(S): Morton, Colin; Smith, David MacDonald; Ruffieux, Vincent  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

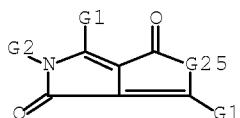
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022848	A2	20030320	WO 2002-EP9792	20020903
WO 2003022848	A3	20030918		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002342633	A1	20030324	AU 2002-342633	20020903
EP 1425282	A2	20040609	EP 2002-779291	20020903
EP 1425282	B1	20070321		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1553912	A	20041208	CN 2002-817586	20020903
CN 1553913	A	20041208	CN 2002-817793	20020903
JP 2005508903	T	20050407	JP 2003-526923	20020903
AT 321049	T	20060415	AT 2002-774550	20020903
AT 357446	T	20070415	AT 2002-779291	20020903
US 2004171847	A1	20040902	US 2004-485840	20040204
US 7326793	B2	20080205		
ZA 2004001106	A	20041019	ZA 2004-1106	20040211
PRIORITY APPLN. INFO.:				
		EP 2001-810875	20010911	
		EP 2001-811249	20011220	
		EP 2002-405223	20020322	
		WO 2002-EP9792	20020903	

GI



AB Title compds. [I; A1, A2 = alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl; A3 = H, alkyl, cyanomethyl, Ar3, CR<sub>3</sub>OR<sub>3</sub>(CH<sub>2</sub>)<sub>m</sub>Ar3, YR<sub>32</sub>; R<sub>30</sub>, R<sub>31</sub> = H, alkyl, (substituted) Ph; Ar3 = (substituted) aryl, cycloalkyl, cycloalkenyl, heteroaryl; Y = CO, CONH, SO<sub>2</sub>NH, SO<sub>2</sub>; R<sub>32</sub> = alkyl, Ar3, aralkyl; A4 = alkyl, Ar3], were prepared by treatment of fuopyrrolediones (II; variables as above) with A4NH<sub>2</sub> (A4 as above). Thus, II (A1, A2 = Ph; A3 = CH<sub>2</sub>Ph) was stirred with DCC, PhNH<sub>2</sub>, and CF<sub>3</sub>CO<sub>2</sub>H in CH<sub>2</sub>Cl<sub>2</sub> at 40° to give 16% I (A1, A2, A4 = Ph; A3 = CH<sub>2</sub>Ph).

MSTR 1



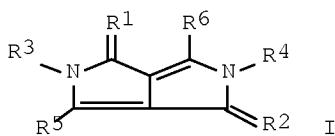
G1 = pyridyl  
 G2 = CH<sub>2</sub>CN  
 G11 = alkyl <containing 1-18 C>  
 G25 = 359

<sup>359</sup>N—G11

Patent location: claim 1

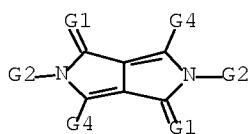
L7 ANSWER 12 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 138:114835 MARPAT Full-text  
 TITLE: Organic electroluminescent material and organic  
 electroluminescent element  
 INVENTOR(S): Suda, Yasumasa  
 PATENT ASSIGNEE(S): Toyo Ink MFG. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003027049	A	20030129	JP 2001-221016	20010723
PRIORITY APPLN. INFO.:			JP 2001-221016	20010723
GI				



AB The invention refers to an organic electroluminescent material I [R1,2 = O or cyano-substituted N, where both R1 and R1 may not be O; R3,4 = H, halo, alkyl, alkenyl, aryl, heterocyclic or COOR7; R7 = alkyl, alkenyl, aryl or heterocyclic; R5,6 = aryl or heterocyclic].

MSTR 1



G1 = (up to 1) O  
G2 = 15

$\text{C}_1\text{C}_2(\text{O})\text{O} \text{---} \text{C}_3$

G4 = pyridyl  
Patent location: claim 1

L7 ANSWER 13 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 134:253732 MARPAT Full-text  
 TITLE: Substituted pyrrolo[2,3-c]pyrrole-1,4-diketone type compounds and their single ring-opening derivatives for colorants  
 INVENTOR(S): Iqbal, Abul; Hao, Zhimin; Yoshihara, Toshio; Ito, Kiyoshi; Nakamura, Kazuhiko; Furukawa, Minoru  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding, Inc., Switz.; Dai Nippon Printing Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

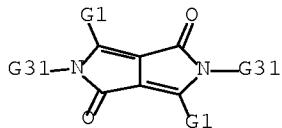
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001081346	A	20010327	JP 1999-240509	19990826

PRIORITY APPLN. INFO.:

JP 1999-240509 19990826

AB The colorants are prepared which have good dispersibility in organic solvents and are useful for coloring plastics, inks, coatings, etc.

MSTR 1



G1 = pyridyl  
G31 = 94

94(O)-98-G10

Patent location:

claim 1

Note:

substitution is restricted

Note:

also incorporates claim 10

L7 ANSWER 14 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 134:229773 MARPAT Full-text

TITLE: Color filter for liquid crystal displays

INVENTOR(S): Yoshiwara, Toshio; Ito, Kiyoshi; Nakamura, Kazuhiko; Furukawa, Minoru

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

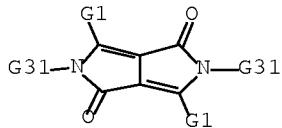
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001066410	A	20010316	JP 1999-240390	19990826
US 6656985	B1	20031202	US 2000-640175	20000817
US 2004050294	A1	20040318	US 2003-642212	20030818
US 7175948	B2	20070213		

PRIORITY APPLN. INFO.:

JP 1999-240390 19990826  
JP 1999-240508 19990826  
JP 1999-240510 19990826  
US 2000-640175 20000817

AB The invention relates to a LCD color filter, a color layer of which contains a sp. pyrrolo[3,4-c]pyrrole derivative therein formed on a translucent substrate to improve the spectral characteristics such as color purity, high transmittance, and high contrast.



G1 = pyridyl  
 G31 = 94

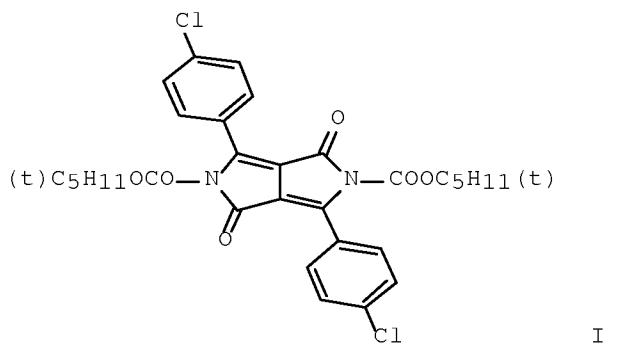
$\text{g}_4(\text{o})-\text{g}_8-\text{G10}$

Patent location: claim 1  
 Note: substitution is restricted  
 Note: also incorporates claim 10

L7 ANSWER 15 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 134:18664 MARPAT Full-text  
 TITLE: Manufacture of calcined and colored pencil cores  
 INVENTOR(S): Kitasawa, Katsunori  
 PATENT ASSIGNEE(S): Mitsubishi Pencil Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 20000336298	A	20001205	JP 1999-149188	19990528
WO 2000073394	A1	20001207	WO 2000-JP3138	20000516
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000044339	A	20001218	AU 2000-44339	20000516
DE 10084661	T0	20020508	DE 2000-10084661	20000516
US 6746524	B1	20040608	US 2001-979774	20011128
PRIORITY APPLN. INFO.:			JP 1999-149188	19990528
			WO 2000-JP3138	20000516

GI

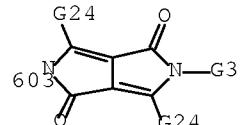


AB Title eraser-erasable cores, with good mech. strength and light resistance, are prepared by forming white or light-colored porous calcined bodies, filling the pores with organic solns. of XY<sub>m</sub> (X = color-developing group residue; Y = H, COOL, L = soluble group with at least one of Y = COOL; m = 1-8), and heating in order to convert XY<sub>m</sub> into pigments. A 0.57-mm porous calcined core (prepared from BN-containing PVC composition and perhydropolysilazane) with flexural modulus (M<sub>f</sub>) of 250.5 MPa was soaked in 15% I-containing PhMe solution, left at room temperature for 24 h, and heated at 180° for 20 min to form a red core with M<sub>f</sub> 252.1 MPa and 99.8% erasability.

MSTR 1

G1—G3

G1 = 603



G3 = 17

<sub>1</sub>G<sub>7</sub>(O)—O—G2

G24 = pyridyl

Patent location:

Note:

claim 1

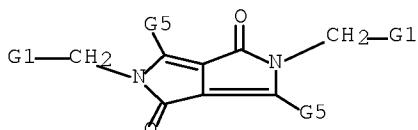
substitution is restricted

L7 ANSWER 16 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 133:325467 MARPAT Full-text  
 TITLE: Cosmetic make-up compositions comprising a  
 pyrrolopyrrole pigment  
 INVENTOR(S): Simon, Jean-Christophe  
 PATENT ASSIGNEE(S): L'oreal, Fr.  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1046389	A1	20001025	EP 2000-401101	20000420
EP 1046389	B1	20030813		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
FR 2792526	A1	20001027	FR 1999-5134	19990422
FR 2792526	B1	20010727		
BR 2000001232	A	20010424	BR 2000-1232	20000418
CA 2306337	A1	20001022	CA 2000-2306337	20000420
CN 1271570	A	20001101	CN 2000-106090	20000420
AT 246914	T	20030815	AT 2000-401101	20000420
ES 2199747	T3	20040301	ES 2000-401101	20000420
US 6372202	B1	20020416	US 2000-557180	20000421
JP 2000336015	A	20001205	JP 2000-122128	20000424
PRIORITY APPLN. INFO.:			FR 1999-5134	19990422

AB Cosmetic make-up comps. comprising orange pigments generating no free  
 radicals, e.g. diketodiarylpolymerole derivs., are disclosed (Markush  
 structure given). A lipsticks contained polyethylene wax 14, sesame oil 78, a  
 tert-Bu derivative of 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole 5, and  
 titanium dioxide 3 g.

MSTR 1



G5 = pyridyl

Patent location: claim 2

Note: substitution is restricted

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 130:126360 MARPAT Full-text  
 TITLE: Production of fine pigment dispersions  
 INVENTOR(S): Sieber, Werner; Hall-Gouille, Veronique

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 93 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

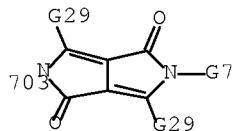
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9901511	A1	19990114	WO 1998-EP3948	19980629
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9887301	A	19990125	AU 1998-87301	19980629
EP 993490	A1	20000419	EP 1998-938669	19980629
EP 993490	B1	20030226		
R: CH, DE, FR, GB, IT, LI				
JP 2002514263	T	20020514	JP 1999-506299	19980629
US 6001168	A	19991214	US 1998-107531	19980630
US 6071989	A	20000606	US 1998-107545	19980630
US 6165681	A	20001226	US 1999-376188	19990817
US 6211347	B1	20010403	US 2000-539912	20000330
PRIORITY APPLN. INFO.:				
		CH 1997-1573	19970630	
		CH 1997-2896	19971216	
		CH 1997-822	19970409	
		CH 1997-823	19970409	
		US 1998-57090	19980408	
		WO 1998-EP3948	19980629	
		US 1998-107545	19980630	

AB The title dispersions, with high stability and good transparency, are prepared by treating mixts. of latent pigments and polymers with chems., heat, or light before or after addition of a solvent. The dispersions are especially useful in the production of color filters. A latent pyrrolopyrrole derivative pigment was mixed (200 mg) in dioxane with 1 g maleic anhydride-octadecene copolymer (mol. weight 50,000), dried at 60° in vacuo and then at 140°, dispersed in dioxane, the polymer was dissolved using ultrasound, and the dispersion was mixed with 700 µL morpholine and 20 mL H<sub>2</sub>O and dried in vacuo to give a red, homogeneous, transparent dispersion with viscosity 2.16 mPa·s at 25° which showed no precipitation after several days.

MSTR 1B

G1—G7

G1 = 703



G7 = 17

${}_{1}G(0)-O-G5$

G29 = pyridyl

Patent location: claim 7

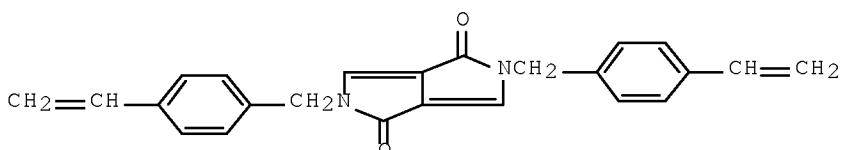
Note: substitution is restricted

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 130:168757 MARPAT Full-text  
 TITLE: Polymerizable diketopyrrolopyrroles  
 INVENTOR(S): Eldin, Sameer  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: Eur. Pat. Appl., 28 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

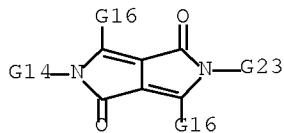
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 894798	A1	19990203	EP 1998-810703	19980721
EP 894798	B1	20051109		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 5919944	A	19990706	US 1998-119434	19980720
CA 2244316	A1	19990130	CA 1998-2244316	19980728
TW 402602	B	20000821	TW 1998-87112321	19980728
JP 11092477	A	19990406	JP 1998-213628	19980729
US 6107491	A	20000822	US 1999-237640	19990126
PRIORITY APPLN. INFO.: CH 1997-1822 19970730 US 1998-119434 19980720				

GI



AB The title compds., with specified structures and giving polymers resisting O and UV, are prepared by the reaction of diketopyrrolopyrroles containing NH groups with organic halides of specified structure in the presence of bases. Adding 0.150 mol 4-(chloromethyl)styrene over 30 min to 0.05 mol Pigment Red 3067E and 0.150 mol K<sub>2</sub>CO<sub>3</sub> stirred in DMF containing hydroquinone at 120-125° and stirring at that temperature for 160 min gave 92.1% diketopyrrolopyrrole I. Photopolyrn. of the products with the monomer Laromer EA 81 is exemplified.

MSTR 1



G1 = CH<sub>2</sub>  
 G14 = alkyl <containing 1-6 C>  
 G16 = pyridyl  
 G23 = 11

1 G<sup>1</sup> — T G<sup>4</sup> — G<sup>5</sup> — T G<sup>9</sup>

Patent location: claim 1  
 Note: substitution is restricted

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 129:176908 MARPAT Full-text  
 TITLE: Soluble chromophores having improved solubilizing groups and their use  
 INVENTOR(S): Hall-Gouille, Veronique; Bize, Aline  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 64 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9832802	A1	19980730	WO 1998-EP248	19980117
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,				

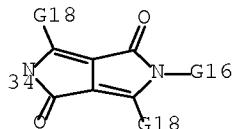
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,  
 UA, UG, UZ, VN, YU, ZW  
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,  
 FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,  
 GA, GN, ML, MR, NE, SN, TD, TG  
 CA 2275965 A1 19980730 CA 1998-2275965 19980117  
 AU 9862109 A 19980818 AU 1998-62109 19980117  
 EP 968250 A1 20000105 EP 1998-904092 19980117  
 EP 968250 B1 20010418  
 R: CH, DE, FR, GB, IT, LI  
 JP 2001513119 T 20010828 JP 1998-531549 19980117  
 TW 444051 B 20010701 TW 1998-87100901 19980123  
 US 6274728 B1 20010814 US 1999-465868 19991216  
 CH 1997-171 19970127  
 WO 1998-EP248 19980117  
 US 1998-13659 19980226

**PRIORITY APPLN. INFO.:**  
 AB The colorants A(B)x (x = 1-8; A = radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindolinone, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series; B = H or solubilizing group) are obtained whereby A is bonded to x groups B via one or more hetero atoms, those hetero atoms being selected from the group consisting of N, O, and S and forming part of the radical A. The colorants are used in high-mol.-weight organic materials, thermo-, photo-, or chemo-sensitive recording materials, light-sensitive neg. or pos. resist compns., ink compns. for ink-jet printing, and color tapes for thermal transfer printing. The soluble chromophore derivs. can be converted to the underivatized form (B = H) by heating after they are incorporated into a substrate. Thus, bis(1,1-dimethyl-3,7-dioxa-1-heptyl) oxydicarbonate was prepared and used to treat C.I. Pigment Violet 37, giving the red tetrakis(1,1,-dimethyl-3,7- dioxa-1-heptyloxycarbonyl) derivative of C.I. Pigment Violet 37 in 65% yield; this pigment was used in a coating composition

MSTR 1B

G1—G16

G1 = 34



G16 = 2

$\xi(O)-O-G_2-G_6-G_7$

G18 = pyridyl

Patent location:

claim 1

Note:

also incorporates claim 7

Note:

additional carbonyl, phenylene, and heteroatom  
interruptions claimed

Note:

substitution is restricted

REFERENCE COUNT:

5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 128:309528 MARPAT Full-text

TITLE: Pigment granulation

INVENTOR(S): Balliello, Paolo; Brucker, Horst Olaf

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.;  
Balliello, Paolo; Brucker, Horst Olaf

SOURCE: PCT Int. Appl., 35 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

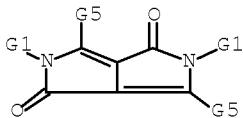
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9817729	A1	19980430	WO 1997-EP5603	19971010
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2265520	A1	19980430	CA 1997-2265520	19971010
AU 9851181	A	19980515	AU 1998-51181	19971010
EP 934364	A1	19990811	EP 1997-945813	19971010
EP 934364	B1	20021204		
R: BE, CH, DE, FR, GB, IT, LI, NL				
CN 1234053	A	19991103	CN 1997-198984	19971010
CN 1085235	B	20020522		
BR 9713272	A	20000328	BR 1997-13272	19971010
JP 2001502730	T	20010227	JP 1998-518902	19971010
US 6241813	B1	20010605	US 1999-269498	19990329
KR 2000052698	A	20000825	KR 1999-703491	19990421
US 2001006034	A1	20010705	US 2001-783902	20010215
US 6423132	B2	20020723		
PRIORITY APPLN. INFO.:				
		CH 1996-2580	19961022	
		WO 1997-EP5603	19971010	
		US 1999-269498	19990329	

AB Organic pigment granules with particle size 0.5-4 mm are prepared using a mixture of ≥90% organic pigment, 0-10% binder (such as Staybelite Resin), and 0-5% neutral emulsifier (such as Emulan OSN) which does not form ions and which dissolves to give a clear solution in water or a C1-4 alc. The mixture is pressed in a continuously operating apparatus consisting of at least one conveying device and a shaping section, and being constructed and operated with a throughput, such that the pressure in its shaping section does not exceed 10 bar. If desired, the cylindrical granules emerging from the dies are converted on a rotating device into ovoid or spherical granules, and the granulated product is dried at a temperature of -50 to +200° at ≤1 atmospheric

The pigments have low dusting tendency and are easily incorporated into macromol. compns. An example using 3,6-bis(4-chlorophenyl)-2,5-dihydropyrrolo[3,4-c]pyrrole-,1-dione was given.

MSTR 1



G1 = alkyl <containing 1-6 C>

G5 = pyridyl

Patent location: claim 5

Note: substitution is restricted

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 21 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 130:13986 MARPAT Full-text

TITLE: Process for preparing diketopyrrolopyrrole derivatives

INVENTOR(S): Hendi, Shivakumar Basalingappa

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corporation, USA

SOURCE: U.S., 10 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

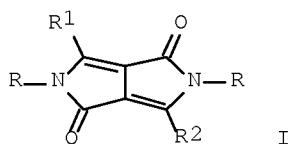
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

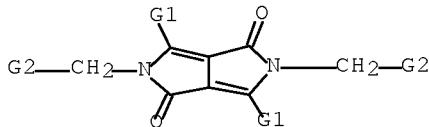
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5840907	A	19981124	US 1997-870353	19970605
US 5919945	A	19990706	US 1998-119894	19980721
PRIORITY APPLN. INFO.:			US 1997-870353	19970605

GI



AB Bis(hydroxymethyl)pyrrolopyrroles (I; R = CH<sub>2</sub>OH; R<sub>1</sub>, R<sub>2</sub> = aryl) are prepared by reacting I (R = H; R<sub>1</sub>, R<sub>2</sub> = aryl) with formaldehyde. I (R = CH<sub>2</sub>OH; R<sub>1</sub>, R<sub>2</sub> = aryl) can be isolated or further reacted in a one pot synthesis to yield I (R = organyl; R<sub>1</sub>, R<sub>2</sub> = aryl).

MSTR 1



G1 = pyridyl

Patent location: claim 1

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 22 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 129:162886 MARPAT Full-text

TITLE: Viscosity reducing 1,4-diketo-3,6-diarylpyrrolo[3,4-c]pyrrole derivatives

INVENTOR(S): Hendi, Shivakumar B.

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corporation, USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

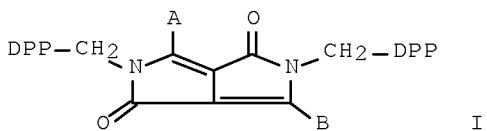
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

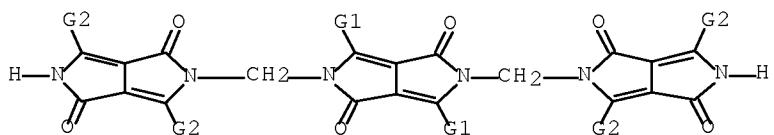
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5 786487	A	19980728	US 1997-938658	19970926
PRIORITY APPLN. INFO.:			US 1997-938658	19970926

GI



AB The title pyrrolopyrrole (DPP) derivs. are I (A, B = aryl), substituted by 0-6 mol SO3M/mol I; where M = H or a metal or ammonium cation, and show excellent rheol. enhancing properties for pigment dispersions, especially those containing quinacridones, DPPs and their solid solution pigments. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole (II) and paraformaldehyde in concentrated (96%) H2SO4 at .apprx.45° gave an intermediate which reacts with 2 mol II to give a product sulfate, suitable for pigments for coatings.

MSTR 1



G1 = pyridyl

Patent location:

claim 1

Note:

substitution is restricted

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 23 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 129:162885 MARPAT Full-text

TITLE: Viscosity reducing 1,4-diketo-3,6-diarylpyrrolo[3,4-c]pyrrole derivatives

INVENTOR(S): Hendi, Shivakumar B.

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corporation, USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

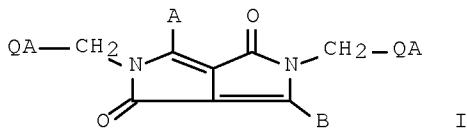
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

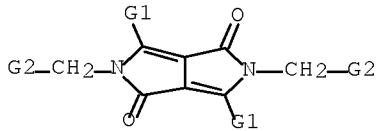
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5 785750	A	19980728	US 1997-938656	19970926
PRIORITY APPLN. INFO.:			US 1997-938656	19970926

GI



I

AB The title pyrrolopyrrole (DPP) derivs. are I (QA = quinacridone radical, A, B = aryl), substituted by 0-6 mol SO3M/mol I; where M = H or a metal or ammonium cation, and show excellent rheol. enhancing properties for pigment dispersions, especially those containing quinacridones, DPPs and their solid solution pigments. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole, quinacridone, and paraformaldehyde in concentrated (96%) H2SO4 at .apprx.45° gave I (A, B = Ph) sulfate, suitable for pigments for coatings.



G1 = pyridyl

Patent location:

claim 1

Note:

substitution is restricted

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 24 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 126:178818 MARPAT Full-text

TITLE: Organic electroluminescent device and  
pyrrolo[3,4-c]pyrrol-based electron-transporting  
material for it

INVENTOR(S): Enokida, Toshio; Tamano, Michiko

PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

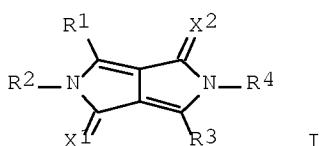
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

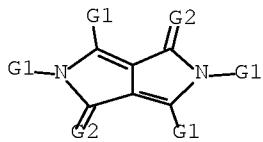
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09003448	A	19970107	JP 1995-157300	19950623
JP 3704748	B2	20051012		

PRIORITY APPLN. INFO.: JP 1995-157300 19950623

GI



AB The material is I [R1-4 = H, (un)substituted aliphatic (cyclic) group, (un)substituted aromatic ring, (un)substituted heterocycle; X1, X2 = O, S, dicyanomethylene]. The device, including a pair of electrode retaining an emitting layer (and an electron-injecting layer) between them, contains I in the emitting layer (or in the electron-injecting layer). The device shows high luminance and long service life.



G1 = carbon chain (opt. subst. by 1 or more G3) /  
pyridyl

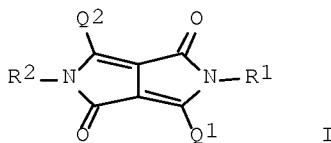
G2 = O

Patent location: claim 1

L7 ANSWER 25 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 127:191922 MARPAT Full-text  
 TITLE: Polymerizable diketo pyrrolopyrroles, their preparation and (co)polymerization  
 INVENTOR(S): Eldin, Sameer Hosam; Iqbal, Abul  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 29 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 787731	A2	19970806	EP 1997-810031	19970122
EP 787731	A3	19970813		
EP 787731	B1	20020807		
R: CH, DE, FR, GB, IT, LI				
CA 2196137	A1	19970731	CA 1997-2196137	19970128
TW 407149	B	20001001	TW 1997-86100903	19970128
CN 1165823	A	19971126	CN 1997-102512	19970129
US 5847156	A	19981208	US 1997-789893	19970129
JP 09323992	A	19971216	JP 1997-16467	19970130
US 6048918	A	20000411	US 1998-146648	19980903
PRIORITY APPLN. INFO.:			CH 1996-227	19960130
			US 1997-789893	19970129

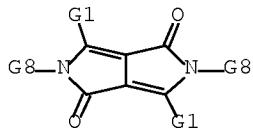
GI



AB The polymerizable dyes, which can be incorporated in or grafted to polymers to be colored, have the structure I [Q1, Q2 = specified (un)substituted (hetero)aryl residues; R1 = C>3 polymerizable group; R2 = R1, C1-6 alkyl,

C6H4R3; R3 = H, C1-6 alkyl]. Thus, I (Q1 = Q2 = Ph, R1 = R2 = H) was condensed with 2 mol Cl(CH<sub>2</sub>)<sub>6</sub>OH, and the product was polymerized with hexamethylene diisocyanate to give an orange-red polyurethane.

MSTR 1



G1 = pyridyl  
G8 = 97

CC#C-G12-Me

G12 = (0-12) CH<sub>2</sub>  
Patent location: claim 1

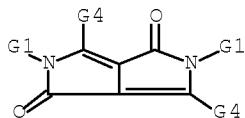
L7 ANSWER 26 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 126:344541 MARPAT Full-text  
 TITLE: Colored metallic pigment and preparation thereof  
 INVENTOR(S): Suzuki, Masakazu; Nakaminami, Hiroshi; Homma, Seiji  
 PATENT ASSIGNEE(S): Japat Ltd., Switz.  
 SOURCE: Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 769535	A2	19970423	EP 1996-810681	19961011
EP 769535	A3	19970917		
EP 769535	B1	20000719		
R: CH, DE, FR, GB, IT, LI				
US 5718753	A	19980217	US 1996-730450	19961015
CA 2188216	A1	19970421	CA 1996-2188216	19961018
JP 09132730	A	19970520	JP 1996-276256	19961018
PRIORITY APPLN. INFO.:			EP 1995-810653	19951020

AB The instant invention relates to a process for the production of colored metallic pigments, as well as these colored metallic pigments themselves, their use to color high mol. weight organic material in the mass and compns. or masterbatches containing them. The colored metallic pigment consists essentially of multiple loose particles of 0.1-1000 µm size each, said particles comprising a core of a transition metals, half metal or alloy, preferably an aluminum flake, and a very fine, substantially continuous, uniform and homogeneous layer of organic pigment particles which is directly

in contact with the metallic core. The core may be superficially oxidized. The colored metallic pigment is prepared by a vacuum deposition process, said process being performed in an apparatus constructed, modified or charged in such a way that the organic pigment gas flows in direction of the metallic core. These pigments have high color intensity and reflectance and are useful for effect pigments in coatings.

MSTR 15



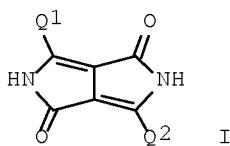
G1 = alkyl <containing 1-6 C>  
(opt. subst. by 1 or more G3)

G4 = pyridyl

Patent location: claim 8

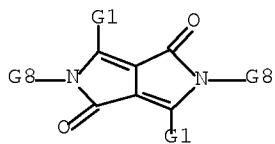
L7 ANSWER 27 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 126:306382 MARPAT Full-text  
TITLE: Monophasic solid solutions with asymmetrical  
pyrrolo[3,4-c]pyrroles as host, their preparation and  
use as pigments  
INVENTOR(S): Hao, Zhimin; Iqbal, Abul  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: Eur. Pat. Appl., 29 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 765919	A2	19970402	EP 1996-810617	19960917
EP 765919	A3	19980401		
EP 765919	B1	20010221		
R: CH, DE, FR, GB, LI				
TW 404973	B	20000911	TW 1996-85110397	19960827
US 5756746	A	19980526	US 1996-700349	19960923
CA 2186319	A1	19970327	CA 1996-2186319	19960924
CN 1159464	A	19970917	CN 1996-122532	19960925
CN 1076744	B	20011226		
JP 09132728	A	19970520	JP 1996-255046	19960926
PRIORITY APPLN. INFO.:			CH 1995-2719	19950926
GI				



AB The solid solns., useful as light- and weather-resistant pigments, have the crystal structure of the major component (60-90 mol%) I [Q1, Q2 = (un)substituted Ph, naphthyl, 3- or 4-pyridyl; Q1 ≠ Q2] and contain 10-40 mol% of a different I (Q1, Q2 = Ph, 3- or 4-pyridyl, C<sub>6</sub>H<sub>4</sub>R-3 or -4; R = F, Cl, CN, NO<sub>2</sub>, CF<sub>3</sub>, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxy, NR<sub>1</sub>R<sub>2</sub>; R<sub>1</sub> = C<sub>1-4</sub> alkyl; R<sub>2</sub> = H, C<sub>1-4</sub> alkyl) or of a quinacridone with limited substitution. Thus, a mixture of 1.4 mmol 2,9-dichloroquinacridone, 5.6 mmol I (Q1 = C<sub>6</sub>H<sub>4</sub>CMe<sub>3</sub>-4, Q2 = C<sub>6</sub>H<sub>4</sub>Cl-4), and 1.18 g KOH in 40 mL DMSO at 50° was treated with a solution of 0.7 mL concentrated H<sub>2</sub>SO<sub>4</sub> in a mixture of 40 mL MeOH and 120 mL H<sub>2</sub>O during 15 min and stirred 5 h at 60° to precipitate the solid solution as a red powder.

MSTR 8



G1 = 4-pyridyl  
G8 = CO<sub>2</sub>CH<sub>2</sub>Ph

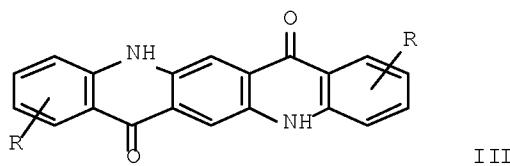
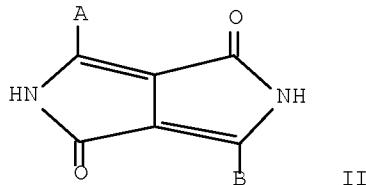
Patent location: claim 13  
Note: substitution is restricted

L7 ANSWER 28 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 126:278956 MARPAT Full-text  
TITLE: Solid solutions of 1,4-diketopyrrolopyrroles and polymers containing them  
INVENTOR(S): Hao, Zhimin; Wallquist, Olof  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: Eur. Pat. Appl., 25 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 763572	A2	19970319	EP 1996-810600	19960910
EP 763572	A3	19980401		
EP 763572	B1	20020410		

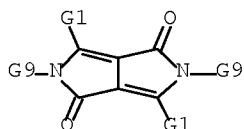
R: CH, DE, FR, GB, LI

US 5821373	A	19981013	US 1996-712722	19960912
CA 2185618	A1	19970319	CA 1996-2185618	19960916
CN 1158873	A	19970910	CN 1996-122501	19960917
CN 1076369	B	20011219		
JP 09132575	A	19970520	JP 1996-245802	19960918
PRIORITY APPLN. INFO.:			CH 1995-2630	19950918
GI				



AB Solid solns. of 3,6-bis(4-biphenylyl)-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione (I) with II (A, B = aromatic or heterocyclic group) or III (R = H, halogen, alkyl, alkoxy) in a (20-90):(10-80) ratio have good pigment properties and dispersibility in plastics and coatings. In an example, a 1:4 solid solution obtained from I and II (A = B = Ph), with both compds. being initially mixed in the form of their N,N-bis(tert-butoxycarbonyl) derivs. for enhanced solubility, was used in a red sprayable and bakeable topcoat composition

MSTR 9



G1 = pyridyl  
G9 = CO<sub>2</sub>CH<sub>2</sub>Ph

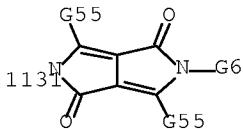
Patent location: claim 5

TITLE: Soluble chromophores containing solubilizing groups which can be easily removed, pigments therefrom and their use  
 INVENTOR(S): Hall-Gouille, Veronique  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Can. Pat. Appl., 48 pp.  
 CODEN: CPXXEB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2182147	A1	19970129	CA 1996-2182147	19960726
TW 473518	B	20020121	TW 1996-85108166	19960706
TW 444006	B	20010701	TW 1996-85108281	19960709
EP 761772	A1	19970312	EP 1996-810476	19960719
EP 761772	B1	20000315		
	R: CH, DE, FR, GB, LI			
EP 764628	A1	19970326	EP 1996-810475	19960719
EP 764628	B1	20010314		
	R: CH, DE, FR, GB, LI			
US 5750758	A	19980512	US 1996-681205	19960722
US 6063924	A	20000516	US 1996-681204	19960722
JP 09048929	A	19970218	JP 1996-197273	19960726
JP 09052868	A	19970225	JP 1996-197274	19960726
CN 1148585	A	19970430	CN 1996-112105	19960727
US 6222047	B1	20010424	US 1998-6360	19980113
US 6359122	B1	20020319	US 2001-767313	20010123
PRIORITY APPLN. INFO.:			CH 1995-2222	19950728
			CH 1995-2968	19951019
			US 1996-681205	19960722
			US 1998-6360	19980113

AB Compds. of formula A(B) $x$ , wherein  $x$  is an integer from 1 to 4, A is the radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, isoindolinone, isoindoline, dioxazine, phthalocyanine, diketopyrrolopyrrole or azo series, which radical A contains  $x$  N-atoms linked with B, preferably with at least one immediately adjacent or conjugated carbonyl group. B is a group of formula CO<sub>2</sub>Q and, if  $x$  = 2, 3 or 4, can also be one, two or three hydrogen atom(s), and Q is a group of formula CR<sub>1</sub>R<sub>2</sub>CR<sub>3</sub>:CR<sub>4</sub>R<sub>5</sub>, CR<sub>1</sub>R<sub>2</sub>C.tplbond.CR<sub>6</sub>, or CR<sub>1</sub>R<sub>2</sub>X, where R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> = H, organic group; X = optionally substituted Ph. These soluble chromophores can be readily converted to the corresponding pigments by heating, even in the substrate into which they can be incorporated without any difficulty in dissolved form. The pigments AH $x$  can thus be readily incorporated into recording and luminescent materials. Examples are given for the preparation and use of bis(2-methyl-3-butyn-2-yl), bis(2-methyl-3-buten-2-yl), and bis(3-methyl-2-buten-1-yl) dicarbonates as acylating agents to provide facile leaving groups for diphenylpyrrolo[3,4-c]pyrrolidinedione, quinacridone, and indigo. The thermal decomposition temps. required are at least 30° lower than those associated with di-tert-Bu dicarbonate.

G1 = 1131



G6 = 363

<sub>363</sub><sup>C</sup>(O)-G15

G55 = pyridyl (opt. substd.)  
G56 = 132

<sub>132</sub><sup>C</sup>(O)-G14

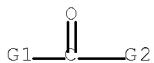
Patent location: claim 1  
Note: also incorporates claim 11  
Note: substitution is restricted

L7 ANSWER 30 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 126:20140 MARPAT Full-text  
TITLE: Structured pigment coating and its manufacture and use  
INVENTOR(S): Zambounis, John; Hofmann, Manfred  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
SOURCE: Eur. Pat. Appl., 32 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

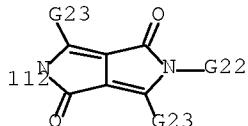
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 742556	A1	19961113	EP 1996-810278	19960501
EP 742556	B1	20021002		
R: CH, DE, FR, GB, IT, LI, NL, SE				
TW 472072	B	20020111	TW 1996-85103597	19960326
TW 505647	B	20021011	TW 1996-85105241	19960502
US 5840449	A	19981124	US 1996-643723	19960506
CA 2176290	A1	19961113	CA 1996-2176290	19960510
JP 09003362	A	19970107	JP 1996-116268	19960510
CN 1150166	A	19970521	CN 1996-110346	19960511
CN 1085710	B	20020529		
CN 1312339	A	20010912	CN 2000-137052	20001228
PRIORITY APPLN. INFO.:			CH 1995-1394	19950512

AB Latent forms of pigments containing protected NH groups or phthalocyanines are applied in solution or melt form to a substrate and the protective groups are removed to provide the pigments as coatings on the substrate. The protective groups may be removed by means of heat, laser, or acid/base vapor. The coating is faster than sublimation or crystallization methods and selectivity may be exercised in regard to surface application and color development. The pigments may have applications as color filters or in information storage. In an example, a dioxane solution of N,N'-bis(tert-butoxycarbonyl)-3,6-diphenyl-1,4-diketopyrrolo[3,4-c]pyrrole was applied to glass and heated to 200° to provide a coating of 2,5-dihydro-3,6-diphenyl-1,4-diketopyrrolo[3,4-c]pyrrole of excellent transparency and homogeneity.

MSTR 2



G1 = 112



G22 = 655

6550)-G49

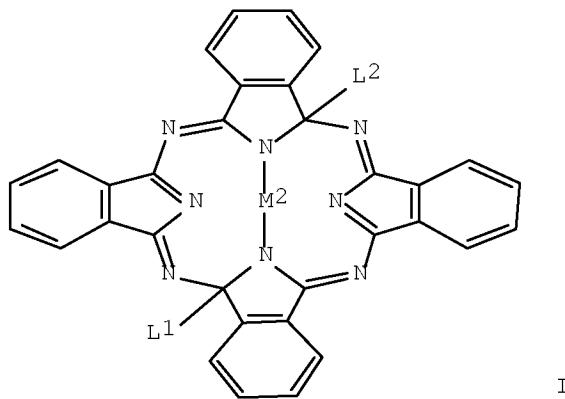
G23 = 4-pyridyl

Patent location: claim 1

L7 ANSWER 31 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 125:181169 MARPAT Full-text  
TITLE: Electrophotographic photoreceptor  
INVENTOR(S): Takahashi, Ryuichi; Yamamoto, Kazuyo; Iqbal, Abul;  
Hao, Zhimin  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.; Japat Ltd  
SOURCE: Eur. Pat. Appl., 46 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 718697	A2	19960626	EP 1995-810788	19951213
EP 718697	A3	19960703		
EP 718697	B1	20011121		
R: CH, DE, FR, GB, LI				
CA 2165760	A1	19960623	CA 1995-2165760	19951220
JP 08234460	A	19960913	JP 1995-334416	19951222
JP 3641310	B2	20050420		
US 5718998	A	19980217	US 1995-577333	19951222
PRIORITY APPLN. INFO.:				
GI				

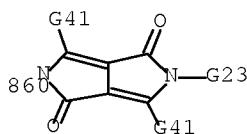


AB The invention is related to an electrophotog. photoreceptor, its preparation, and its use in electrophotog. The instant photoreceptor comprises a conductive substrate and a photosensitive layer containing an organic pigment as a charge-generating material, wherein the organic pigment is formed from a soluble organic pigment precursor. Particularly suitable soluble pigment precursors are compds. having formula AD<sub>1</sub>(D<sub>2</sub>)<sub>x</sub> or I, wherein A represents a chromophore residue of perylene, quinacridone, dioxazine, anthraquinone, azo, phthalocyanine, isoindolinone, isoindoline, indigo, quinophthalone, or pyrrolopyrrole with 1 to 5 N atoms bound to the D<sub>1</sub> and D<sub>2</sub> groups, whereby each N atom of A is bound to 0, 1, or 2 groups of D<sub>1</sub> and D<sub>2</sub>, D<sub>1</sub> and D<sub>2</sub> are carboxylate groups, x is an integer of 0-4, L<sub>1</sub> and L<sub>2</sub> are halogen, amino, or alkoxy, and M<sub>2</sub> is 2 hydrogen atoms or a metal or oxometal with at least 2 valences.

MSTR 1

G1—C(O)—G2

G1 = 860



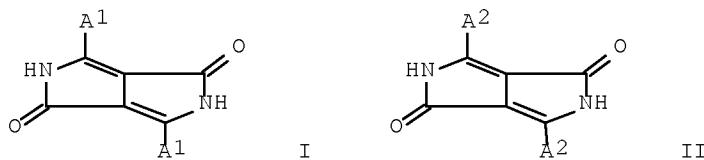
G23 = 245

$_{245}^{860})\cdot G22$

G41 = pyridyl  
 Derivative: or derivatives  
 Patent location: claim 2  
 Note: substitution is restricted

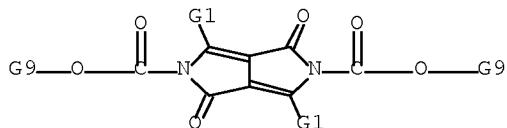
L7 ANSWER 32 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 124:319682 MARPAT Full-text  
 TITLE: Mixed crystals and solid solutions of  
 1,4-diketopyrrolo[3,4-c]pyrroles and their preparation  
 and polymeric materials containing them  
 INVENTOR(S): Hao, Zhimin; Iqbal, Abul; Medinger, Bernhard;  
 Wallquist, Olof  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 26 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 704497	A1	19960403	EP 1995-810590	19950920
EP 704497	B1	19991215		
R: CH, DE, FR, GB, IT, LI, NL				
CA 2159171	A1	19960329	CA 1995-2159171	19950926
CN 1130661	A	19960911	CN 1995-117786	19950927
CN 1066767	B	20010606		
JP 08199085	A	19960806	JP 1995-250465	19950928
JP 3862772	B2	20061227		
US 5708188	A	19980113	US 1995-535438	19950928
PRIORITY APPLN. INFO.:			CH 1994-2936	19940928
GI				



AB Equimolar mixts. (crystalline) and solid solns. of the sym. diaryldiketopyrrolopyrroles I and II (A1, A2 = aromatic or heterocyclic aryl groups) with pigment properties equivalent to those of the corresponding individual asym. diaryldiketopyrrolopyrroles (more difficult to prepare) are obtained by first converting the pigments into a soluble form such as the N-tert-butoxycarbonyl derivative, mixing the soluble derivs., and then precipitating the mixed crystals by removal of the solubilizing groups. The mixts. are suitable for coloration of plastics and pigments, especially when incorporated into masterbatches. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole was treated with di-tert-Bu dicarbonate to provide the N,N'-bis(tert-butoxycarbonyl) derivative (III). 1,4-Diketo-3,6-bis(4-tert-butylphenyl)pyrrolo[3,4-c]pyrrole was similarly converted and the product was mixed with an equimolar amount of III and then treated with p-toluenesulfonic acid to remove the N-tert-butoxycarbonyl groups and precipitate 1:1 mixed crystals of I (A1 = Ph) and II (A2 = 4-tert-butylphenyl).

MSTR 3



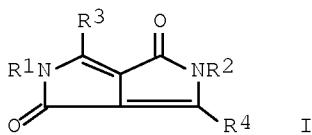
G1 = pyridyl

Patent location: claim 5

L7 ANSWER 33 OF 40 MARPAT COPYRIGHT 2008 ACS on STN

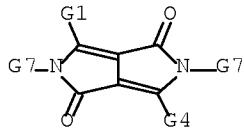
ACCESSION NUMBER: 124:29748 MARPAT Full-text  
 TITLE: Preparation of amine oxide group-containing  
 pyrrolo[3,4-c]pyrroles as photoreceptors  
 INVENTOR(S): Hao, Zhimin; Iqbal, Abul; Kirchmayr, Rudolf  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 673939	A1	19950927	EP 1995-810164	19950313
EP 673939	B1	19961023		
R: CH, DE, FR, GB, LI				
US 5502196	A	19960326	US 1995-404012	19950314
JP 07268230	A	19951017	JP 1995-60162	19950320
JP 3722235	B2	20051130		
PRIORITY APPLN. INFO.: GI			CH 1994-843	19940321

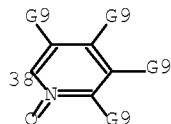


AB Title compds. [I; R1,R2 = H, alkyl, alkoxy, etc.;  $\geq 1$  of R3,R4 = heteroaryl amine oxide and the other may be (un)substituted Ph, naphthyl, etc.] were prepared Thus, 4-cyanopyridine N-oxide was cyclocondensed with  $(CH_2CO_2CHMe_2)_2$  to give I (R1 = R2 = H, R3 = R4 = 4-pyridyl N-oxide). Formulations comprising I were prepared No performance data were given.

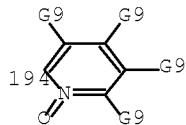
MSTR 1



G1 = 38



G4 = 194



G7 = alkyl <containing 1-18 C>  
 Patent location: claim 1  
 Note: substitution is restricted

L7 ANSWER 34 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 123:183553 MARPAT Full-text  
 TITLE: Compositions for making structured color images and

INVENTOR(S): application thereof.  
 Schaedeli, Ulrich; Zambounis, John S.; Iqbal, Abul;  
 Hao, Zhimin; Dubas, Henri  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij BV, Neth.  
 SOURCE: Eur. Pat. Appl., 56 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

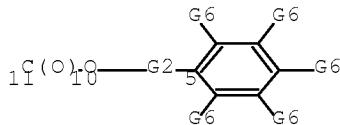
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 654711	A1	19950524	EP 1994-810649	19941114
EP 654711	B1	19990602		
R: CH, DE, FR, GB, IT, LI				
CA 2135657	A1	19950523	CA 1994-2135657	19941118
US 5879855	A	19990309	US 1994-341721	19941118
JP 08006242	A	19960112	JP 1994-287689	19941122
JP 3510927	B2	20040329		
US 6040108	A	20000321	US 1998-204190	19981203
US 6180315	B1	20010130	US 1999-458771	19991210
PRIORITY APPLN. INFO.:			EP 1993-810807	19931122
			US 1994-341721	19941118
			US 1998-204190	19981203

AB Compns. for making structured color images comprising (a) a soluble pigment precursor which can be transformed to an insol. pigment by chemical, thermal, photolytic or radiation-induced method, and (b) a binder polymer or prepolymer, or a pos. or neg. resist-type resin which can be structured by crosslinking, polymerization or depolymn. by applying heat or electromagnetic irradiation. The compns. can be applied to optical and thermal recording, printing, and the production of color filters for liquid crystal displays, with high accuracy, high transparency and high stability.

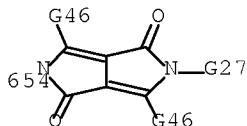
MSTR 1

G18—G1

G1 = 11



G2 = bond  
 G18 = 654



G27 = CO<sub>2</sub>Bu-t

G46 = pyridyl

Patent location:

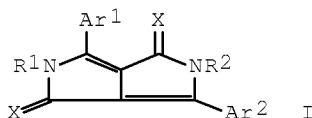
claim 3

Note:

substitution is restricted

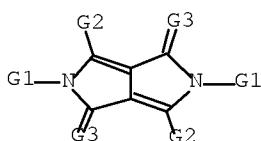
L7 ANSWER 35 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 120:311872 MARPAT Full-text  
 TITLE: Organic electroluminescent device  
 INVENTOR(S): Oonishi, Toshihiro; Doi, Hideji  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05320633	A	19931203	JP 1992-132213	19920525
PRIORITY APPLN. INFO.:			JP 1992-132213	19920525
GI				



AB The device contains a luminescent layer, sandwiched by a pair of electrodes, containing 0.005-15 parts pyrrolo[3,4-c]pyrrole compound I (R1-2 = H, C1-12 alkyl, C6-14 aryl; Ar1-2 = C6-14 aryl, C4-12 heterocyclic; X = O, S, Se).

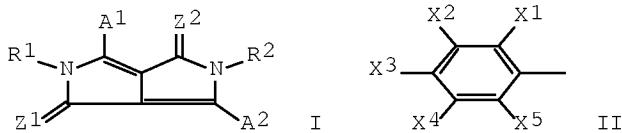
MSTR I



G1 = alkyl <containing 1-12 C>  
 G2 = pyridyl  
 G3 = O  
 Patent location: claim 1

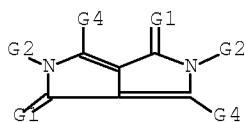
L7 ANSWER 36 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 118:29594 MARPAT Full-text  
 TITLE: Organic electroluminescent element  
 INVENTOR(S): Matsumura, Michio; Kudo, Tetsu; Wooden, Gary  
 PATENT ASSIGNEE(S): Japat Ltd., Switz.  
 SOURCE: Eur. Pat. Appl., 22 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 499011	A1	19920819	EP 1991-810097	19910212
R: GB				
PRIORITY APPLN. INFO.:			EP 1991-810097	19910212
GI				



AB Electroluminescent devices are described which employ as a light-emitting material compds. described by the general formula I (Z1 and Z2 are independently selected from O and S; R1 and R2 are independently selected from H, C1-18 alkyl groups, C3-18 alkenyl groups in which the double bond is not in the C1 position, or a phenylalkyl group with a C1-5 alkyl group; A1 and A2 are independently selected from 3-pyridyl, 4-pyridyl, or groups described by the general formula II in which X1 and X5 are independently selected from H, C1-5 alkyl groups, C1-5 alkoxy groups, or halogens, and X1, X3, and X4 are independently selected from H, C1-5 alkyl groups, C1-5 alkoxy groups, dialkylamino groups with 1-5 C/alkyl group, Ph, CN, -CF<sub>3</sub>, or halogens).

MSTR 1



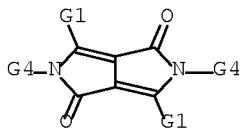
G1 = O  
 G2 = CH<sub>2</sub>Ph  
 G4 = 3-pyridyl  
 Patent location: claim 1  
 Note: substitution is restricted

L7 ANSWER 37 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 116:265222 MARPAT Full-text  
 TITLE: New electrochromic compositions based on  
       diketopyrrolopyrroles  
 INVENTOR(S): Mizuguchi, Jin; Rochat, Alain Claude  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 467846	A1	19920122	EP 1991-810557	19910711
EP 467846	B1	19940831		
R: CH, DE, FR, GB, LI				
US 5169953	A	19921208	US 1991-730418	19910716
CA 2047392	A1	19920121	CA 1991-2047392	19910718
JP 04234392	A	19920824	JP 1991-178591	19910719
US 5298063	A	19940329	US 1992-945075	19920915
PRIORITY APPLN. INFO.:				
		CH 1990-2418		19900720
		US 1991-730418		19910716

AB The title compns. comprise a 1,4-diketopyrrolo-[3,4-c]-pyrrolo derivative combined with an auxiliary redox system of the ferrocyanide, ferrocene, or NH<sub>4</sub><sup>+</sup>-Fe (II) sulfate type in combination with ≥1 conductive salt. Use of the compns. in electrochromic displays and methods for producing displays using the compns. are described. Selected derivs. are also claimed.

MSTR 4B



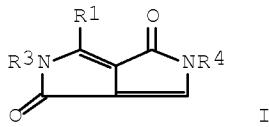
G1 = pyridyl (opt. substd.)  
 G4 = alkyl <containing 1-12 C>  
       (substd. by alkoxy carbonyl <containing 1-4 C>)  
 Patent location: claim 1

L7 ANSWER 38 OF 40 MARPAT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 113:68324 MARPAT Full-text

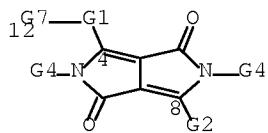
TITLE: Aminated diketodi(het)arylpyrrolopyrroles as photoconductors  
 INVENTOR(S): Rochat, Alain Claude; Wallquist, Olof; Iqbal, Abul;  
 Mizuguchi, Jin  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 353184	A1	19900131	EP 1989-810523	19890711
EP 353184	B1	19940615		
R: CH, DE, FR, GB, LI				
KR 9711391	B1	19970710	KR 1989-10269	19890719
JP 02088579	A	19900328	JP 1989-186198	19890720
JP 3076346	B2	20000814		
US 5973146	A	19991026	US 1993-128332	19930929
JP 11344817	A	19991214	JP 1999-128494	19990510
JP 3076557	B2	20000814		
PRIORITY APPLN. INFO.:				
		CH 1988-2769	19880720	
		US 1989-381212	19890717	
		JP 1989-186198	19890720	
		US 1993-47886	19930415	

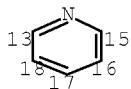
GI



AB The title compds. I (R1 = substituted aminophenyl, substituted 5-amino-2-pyridyl, or substituted 6-amino-3-pyridyl; R2 = substituted Ph, substituted 2-pyridyl, or substituted 3-pyridyl; R3, R4 = H, C1-18 alkyl, carbamoyl, C2-13 alkylcarbamoyl, C3-25 dialkylcarbamoyl, and unsubstituted or substituted Ph or benzyl) are prepared for use as photoconductors in electrophotog. photoreceptors. Thus, 1,6-diketo-3,6-bis(4-bromophenyl)pyrrolo[3,4-c]pyrrole was reacted with Me2N to give 1,6-diketo-3,6-bis(4-dimethylaminophenyl)pyrrolo[3,4-c]pyrrole (II) (69.3% yield). A layer of II combined with a larger of p-diethylaminobenzaldehyde diphenylhydrazone on an Al support produced a photoreceptor with a photosensitivity (E1/2) of 8 mJ/cm2.



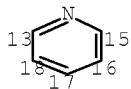
G1 = 15-4 18-12 / 18-4 15-12



G2 = 51 / 20

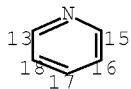
${}^5\text{G}^1\text{2}\xrightarrow{} {}^5\text{G}^1\text{3}$        ${}^2\text{G}^3\xrightarrow{} {}^2\text{G}^7$

G3 = 15-8 18-21 / 18-8 15-21



G4 = CONH<sub>2</sub>

G12 = 15-8 16-52 / 15-8 17-52 / 15-8 18-52 /  
 15-8 13-52 / 16-8 15-52 / 16-8 17-52 / 16-8 18-52 /  
 16-8 13-52



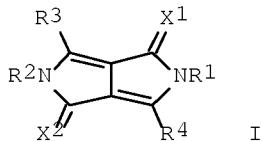
Patent location: claim 1

L7 ANSWER 39 OF 40 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:1151141 CAPLUS Full-text  
 DOCUMENT NUMBER: 147:460224  
 TITLE: Field-effect transistors  
 INVENTOR(S): Ikeda, Masaaki; Kuwahara, Hirokazu; Adachi, Chihaya  
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

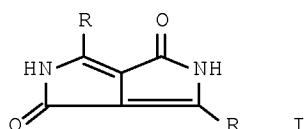
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007266285	A	20071011	JP 2006-89045	20060328
PRIORITY APPLN. INFO.:			JP 2006-89045	20060328
GI				



AB FETs use, as semiconductors, the compds. (I), where X1, X2 = O, S or Se; and R1-4 = H, or aliphatic hydrocarbon or aromatic groups which may be substituted.

L7 ANSWER 40 OF 40 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2002:712239 CAPLUS Full-text  
DOCUMENT NUMBER: 138:116787  
TITLE: DPP dyes as ligands in transition-metal complexes  
AUTHOR(S): Lorenz, Ingo-Peter; Limmert, Michael; Mayer, Peter;  
Piotrowski, Holger; Langhals, Heinz; Poppe, Martin;  
Polborn, Kurt  
CORPORATE SOURCE: Department Chemie, Universitat Munchen, Munchen,  
81377, Germany  
SOURCE: Chemistry--A European Journal (2002), 8(17), 4047-4055  
CODEN: CEUJED; ISSN: 0947-6539  
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 138:116787  
GI



AB The DPP dyes (= diketopyrrolopyrrole) (I; R = Ph, 4-Me, 4-Cl, 4-NCC<sub>6</sub>H<sub>4</sub>, 4-pyridyl, 4-thienyl) (H<sub>2</sub>L) are deprotonated to give the corresponding dianions. These are treated with two moles of the transition-metal complexes [LnMX] = [(Ph<sub>3</sub>P)<sub>2</sub>MX] (M = Cu, Ag; X = Cl, NO<sub>3</sub>), [(Ph<sub>3</sub>P)AuCl], [(Et<sub>3</sub>P)AuCl],

[(tBuNC)AuCl], [(Ph<sub>3</sub>P)<sub>2</sub>PdCl<sub>2</sub>], and [(Ph<sub>3</sub>P)<sub>2</sub>PtCl<sub>2</sub>] to give the novel bismetalated DPP dyes [L<sub>1</sub>nM(μ-L)ML<sub>1</sub>n] (M = Cu, Ag, Au, PdCl, PtCl; L<sub>1</sub> = PPh<sub>3</sub>, PEt<sub>3</sub>, t-BuNC). In comparison with the starting materials, these compds. show better solubilities, high fluorescence quantum yields ( $\Phi \geq 80\%$ ), and bathochromic absorptions. The compds. [PPh<sub>3</sub>Cu(μ-L)CuPPh<sub>3</sub>] (R = 4-ClC<sub>6</sub>H<sub>4</sub>) 4c, [Ph<sub>3</sub>PAg(μ-L)AgPPh<sub>3</sub>] (R = Ph) 5a, [Ph<sub>3</sub>PAu(μ-L)AuPPh<sub>3</sub>] (R = 4-MeC<sub>6</sub>H<sub>4</sub>) 6b, p-C<sub>1</sub>C<sub>6</sub>H<sub>4</sub> 6c, 4-pyridyl 6e), [Et<sub>3</sub>PAu(μ-L)AuPEt<sub>3</sub>] (R = 4-ClC<sub>6</sub>H<sub>4</sub>) 7c, and [t-BuNCAu(μ-L)AuCNBu-t] (R = 4-ClC<sub>6</sub>H<sub>4</sub>) 8c were characterized by x-ray crystallog. The Cu and Ag atoms in 4c and 5a are trigonal planar and are surrounded by the P atoms of the phosphine ligands and the N atom of the DPP dianion of I. Both metals are somewhat forced out-of-plane, and the P<sub>2</sub>M plane and the Ph planes of R<sub>1</sub> are twisted by >70° and <25°, resp., towards the chromophore plane. The Au atoms in 6-8 are linearly coordinated to one N and one P (6b, c, e, 7c) or one C atom (8c), resp. The Au atoms are only slightly pressed out-of-plane, and the P substituents are staggered so that there is enough space for the planarization of R<sub>1</sub> into the plane of the chromophore. Compound 8c shows intermol. d<sub>10</sub>-d<sub>10</sub> interactions between Aul centers of different mols., and these interactions lead to infinite chains of parallel oriented mols. in a gauche conformation of neighbors (torsion angle = 150°) in the crystal.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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